

GLOSSARY OF ACRONYMS AND TECHNICAL TERMS

1G	First-generation, analog, mobile telecommunications technology introduced in the 1980s.
2G	Second-generation mobile telecommunications technology. 2G networks began operation in the 1990s. Compared to 1G technology, 2G technology provided several advantages. Voice transmitted over 2G is digitally encrypted. Because 2G systems make much more efficient use of spectrum, they offer greater penetration levels relative to 1G systems. Moreover, 2G introduced data services for mobile, beginning with SMS (short message service), better known as text messaging.
3G	<p>Third-generation mobile telecommunications technology. First deployed during the early 2000s, 3G technology enables a wide range of voice and data applications, all carried over digital radio signals. 3G services include wide-area wireless voice telephone, mobile Internet access, video calls and mobile TV.</p> <p>3G technology includes the evolution of the leading 2G standards, CDMA and GSM, into improved standards such as EVDO and UMTS, but those improved 3G standards remain mutually incompatible. Because most mobile telecommunications in the United States today is still conducted on 3G networks, the transition from 3G to 4G communications will require, at least for some period, radio access network and user equipment that is backward-compatible with 3G, even as this equipment facilitates 4G communications.</p>
3GPP	<p>3rd Generation Partnership Project. 3GPP is a standard-setting organization comprised of six Organizational Partners spanning the entire world. Formed in 1998, the intended purpose of 3GPP is to fairly and impartially create global standards for mobile telecommunications technologies around the world, including the United States. Originally designed to improve third-generation (3G) technologies derived from GSM (Global System for Mobile Communications), 3GPP now carries responsibility for setting fourth-generation (4G) telecommunications standards, especially LTE (Long-Term Evolution).</p> <p>3GPP standards are embodied in a series of technical documents known as “Specifications.” Updates to the Specifications are issued sequentially in a series of “Releases.” The technologies and methods set forth in each Release may build upon or add to a prior Release. Once a Release is completed by 3GPP, it is adopted and promulgated as a standard by 3GPP's regional organizational partners.</p> <p>Most of 3GPP’s standard-setting work takes place in its Technical Specification Groups and Working Groups. See the definitions of Technical Specification Group and Working Group for further details.</p>

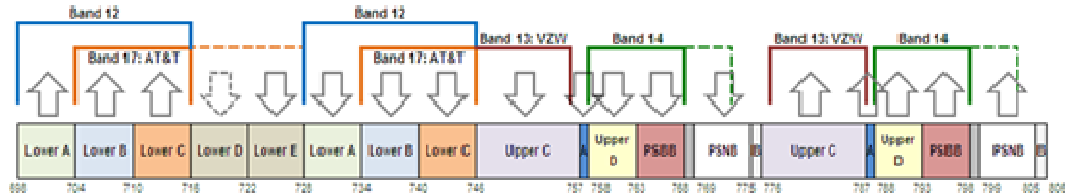
EXHIBIT A

4G	<p>Fourth-generation mobile telecommunications technology. 4G is the successor to 3G and 2G technologies and is intended eventually to supplant those standards. In contrast with 3G communications, whose benchmark speed is 0.2 megabits per second, peak speed requirements for 4G contemplate transmission at 100 megabits per second for high mobility communication (trains and cars) and one gigabit per second for low mobility communication (pedestrians and stationary users).</p> <p>4G systems are expected to provide comprehensive and secure mobile communications for smartphones, tablet computers, and other mobile devices. 4G services include ultra-broadband Internet access, voice over 4G Internet protocol (4G VoIP, also known as voice over LTE or VoLTE), high-speed gaming, and streaming multimedia.</p>
4G-LTE	<p>Long Term Evolution, also known as 4G-LTE, is a fourth-generation mobile telecommunications standard. This set of standards for wireless, high-speed transmission represents the next step in the evolution of GSM-based 2G and 3G technologies and promises improved capacity and speed over GSM and UMTS. 4G-LTE standards were developed by the Third Generation Partnership Project, or 3GPP. Because even CDMA-based carriers such as Verizon have announced that they are migrating to 4G-LTE, this standard is widely expected to become the first truly global standard for mobile telecommunications.</p>

700 MHz spectrum

700 MHz spectrum — or more precisely, spectrum from 698 MHz to 806 MHz — was previously used for analog television broadcasting, specifically UHF channels 52 through 69. The transition from analog to digital television made these channels available for reallocation through sales such as Auction 73. 700 MHz spectrum is described in the wireless industry as “beachfront spectrum” because of its desirable characteristics. It promises substantial technical and competitive advantages over higher frequencies that have been used for earlier generations of wireless communications. Lower frequency signals travel greater distances, penetrate buildings and other obstructions more effectively, and will require fewer towers to serve larger geographical areas.

The following is a graphic depiction of the 700 MHz spectrum:



The 700 MHz spectrum is divided into two halves, the Lower half from 698 MHz to 746 MHz (called the Lower 700 MHz spectrum) and the Upper half from 746 MHz to 806 MHz (called the Upper 700 MHz spectrum). The Lower 700 MHz spectrum, which figures most prominently in this dispute, is divided into 6 MHz blocks. Three 6 MHz blocks at 698 MHz to 716 MHz, designated for transmission from the device to the base station, are paired with three 6 MHz blocks at 728 MHz to 746 MHz, designated for transmission from the base station to the device. Those six blocks form the Lower A, Lower B, and Lower C Blocks. The Lower D and E Blocks are unpaired spectrum suitable for high-power broadcast applications, such as Qualcomm’s MediaFLO technology.

The Upper 700 MHz spectrum is also divided into blocks. Verizon purchased Upper C Block spectrum in Auction 73, and intends, at least initially, to operate its 4G-LTE network on its newly acquired Upper C Block spectrum.

Auction 73

In early 2008, the Federal Communications Commission conducted Auction 73, which licensed rights in a significant portion of the 700 MHz spectrum, including the Lower A, B, and C Blocks and Upper C blocks.

Band 12

Band 12 refers to 3GPP specifications that permit mobile telecommunications equipment, from radio access network equipment to mobile devices, to operate across all of Lower A Block, Lower B Block, and Lower C Block of 700 MHz spectrum. Band 12 was designated by 3GPP prior to Auction 73.

The following is a graphic depiction of Band 12 and the Lower 700 MHz spectrum:

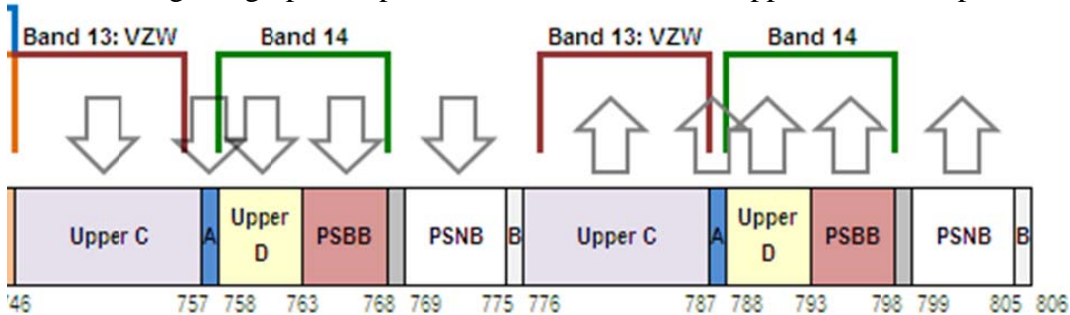


As purchasers of Lower A Block, Cellular South and other similarly situated wireless carriers are “Band 12 operators,” since they require RAN equipment and devices that conform to 3GPP’s Band 12 standards.

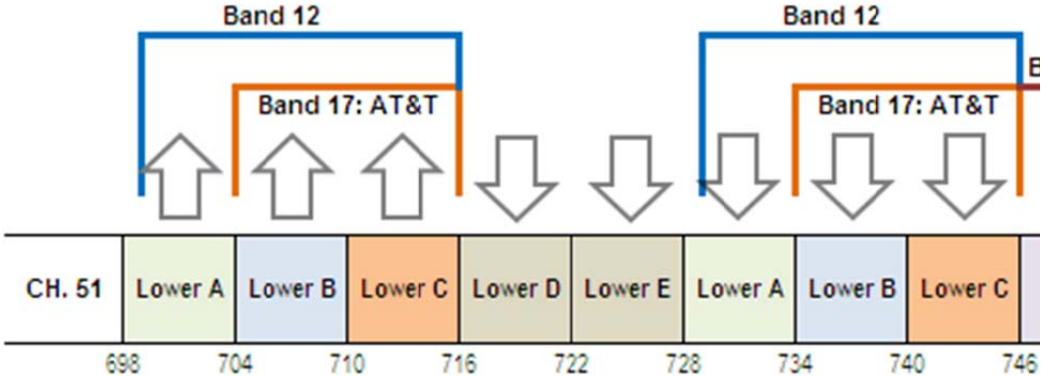
Band 13

Band 13 refers to 3GPP’s specifications for mobile telecommunications equipment in the Upper C Block of 700 MHz spectrum.


The following is a graphic depiction of Band 13 and the Upper 700 MHz spectrum:



In Auction 73, Verizon purchased almost all of the licenses in this portion of the 700 MHz spectrum.

<p>Band 17 (originally called Band 15)</p>	<p>Band 17 refers to 3GPP's specifications for mobile telecommunications equipment in the Lower B Block and Lower C Block of 700 MHz spectrum, which were requested by Defendants and approved after Auction 73.</p> <p>The following is a graphic depiction of Band 17 and the Lower 700 MHz spectrum:</p>  <p>When it was originally proposed by Defendants following Auction 73, Band 17 was called Band 15. Band 17 is entirely subsumed within Band 12. Band 17 consciously excludes Lower A Block, where Cellular South and many other similarly situated smaller wireless carriers purchased 700 MHz licenses in Auction 73. Because the very existence of Band 17 enables AT&T, the owner of virtually all spectrum in the Lower B and Lower C Blocks, to demand equipment made specifically for AT&T's 4G ecosystem, the deliberate separation of Band 17 from the rest of Band 12 severely undermines the ability of Band 12 carriers operating within Lower A Block frequencies to obtain equipment of technologically comparable quality and on a timely basis, relative to AT&T's access to equipment crafted to Band 17 specifications.</p>
<p>BTA</p>	<p>Basic Trading Area is the term used to describe the geographic boundary of an FCC licensing area. BTAs are based on the Rand McNally Commercial Atlas & Marketing Guide, 123rd Edition, extended and revised by the Federal Communications Commission, 59 F.R. 46195 (September 7, 1994). Newton's Telecom Dictionary provides the definition of BTAs: "Geographic boundaries that segment the country for FCC licensing purposes. . . . BTA boundaries follow county lines and include the county or counties whose residents make the bulk of their shopping goods purchases in the area. The FCC has used BTA to license a number of services including broadband and narrowband Personal Communications."</p>
<p>BTA 449</p>	<p>BTA 449 refers to the specific area designated by the FCC consisting of the following Mississippi counties: Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tippah, Tishomingo and Union. BTA 449 encompasses a relevant submarket for the purpose of this litigation which is also referred to as the Northeast Mississippi Geographic Submarket. A map of BTA 449 is attached as Exhibit E. BTA 449 corresponds to a longstanding administrative area used by Cellular South known as Area T.</p>

Cellular or Cellular Spectrum	Cellular spectrum is that spectrum within the 800 MHz frequency range. The FCC assigned licenses for Cellular spectrum in the early 1980s by allocating two blocks of that spectrum – referred to as the A and B Blocks (consisting of 825-845 MHz and 870-890 MHz, respectively) to two Original Service Licensees (OSLs) without competitive bidding.
Cellular South’s Existing Service Area	Cellular South’s Existing Service Area is a geographic market which includes the area in which Cellular South presently provides service, including most of Mississippi, and some portions of Tennessee, Alabama, and the Florida panhandle. Cellular South’s Existing Service Area is depicted on the map attached as Exhibit B. Cellular South provides flat-rate, unlimited voice and data plans, nationwide digital coverage, and third generation, or 3G, data service. Thus, Cellular South competes in the wireless carrier market in Cellular South’s Existing Service Area.
CDMA	Code Division Multiple Access, the technological basis for 2G and 3G communications used by Verizon, Cellular South, and other carriers. CDMA is incompatible with GSM.
FCC	Federal Communications Commission
GFPA	Good Faith Purchasers Alliance. The GFPA is comprised of wireless telecommunications carriers, including Cellular South, which bought licenses in the Lower 700 MHz spectrum in Auction 73. On September 29, 2009, the GFPA filed a request for FCC rulemaking called “Petition for Rulemaking Regarding the Need for 700 MHz Mobile Equipment to be Capable of Operating on all Paired Commercial 700 MHz Frequency Blocks,” M 11-592. Throughout this Complaint, this petition is called the “Interoperability Petition.”
GSM	Global System for Mobile Communications, the technological basis for 2G and 3G communications used by AT&T, Corr Wireless, and other carriers. GSM is incompatible with CDMA.
HSPA+	Evolved High-Speed Packet Access is an advanced 3G standard for mobile communications. With downlink speeds reaching 84 megabits per second and uplink speeds reaching 22 megabits per second, HSPA+ represents a significant improvement in 3G communications. Although HSPA+ falls short of 4G speeds, several carriers have marketed networks using HSPA+ as “4G.” Enhanced 3G standards such as HSPA+ should not be confused with LTE, which meets the full definition of fourth-generation mobile communications.
Lower 700 MHz Roaming Access Market	The Lower 700 MHz Roaming Access Market is the market for the purchase and/or exchange of roaming access on the Lower 700 MHz spectrum. The relevant geographical market for the Lower 700 MHz Roaming Access Market includes the entire United States. Such roaming may be acquired on a nationwide basis, or on less than a nationwide basis from carriers only able to provide roaming in that smaller area.

<p>Lower A, B, and C Blocks</p>	<p>The Lower 700 MHz spectrum, which figures most prominently in this dispute, is divided into 6 MHz blocks. Three 6 MHz blocks at 698 MHz to 716 MHz, designated for transmission from the device to the base station, are paired with three 6 MHz blocks at 728 MHz to 746 MHz, designated for transmission from the base station to the device. Those six blocks form the Lower A, Lower B, and Lower C Blocks. The Lower D and E Blocks are unpaired spectrum suitable for high-power broadcast applications, such as Qualcomm's MediaFLO technology.</p> <p>The following is a graphic depiction of the Lower A, B, and C Blocks:</p>  <p>In Auction 73, AT&T, Verizon, Cellular South, and several other wireless carriers bought licenses throughout the Lower A, B, and C Blocks. AT&T acquired virtually all of Lower B Block and Lower C Block. Cellular South and many other similarly situated smaller carriers acquired licenses in Lower A Block. Cellular South acquired some licenses in the Lower B and Lower C Blocks, but those licenses, standing alone without Cellular South's licenses in the Lower A Block, are not enough to enable Cellular South to build a full 4G-LTE network. Verizon also acquired licenses in Lower A Block and Lower B Block spectrum, but evidently has no immediate plans to deploy a 4G-LTE network using those frequencies.</p>
<p>Interoperability Petition</p>	<p>The Petition filed before the FCC by the Good Faith Purchases Alliance (GFPA), and styled the "Petition for Rulemaking Regarding the Need for 700 MHz Mobile Equipment to be Capable of Operating on all Paired Commercial 700 MHz Frequency Blocks," bearing docket number RM 11-592.</p>
<p>LTE</p>	<p>Long-Term Evolution, also known as 4G-LTE. See the definition of 4G-LTE for more details.</p>
<p>Northeast Mississippi Geographic Submarket</p>	<p>The Northeast Mississippi Geographic Submarket is a geographic submarket relevant to Count Two and comprised of the counties near and surrounding Tupelo, Mississippi, including Alcorn, Calhoun, Chickasaw, Itawamba, Lee, Monroe, Pontotoc, Prentiss, Tippah, Tishomingo, and Union Counties. This area has been delineated by the FCC as BTA 449, and internally by Cellular South as Area T.</p>
<p>PCS</p>	<p>PCS, or Broadband Personal Communications Service, is in the 1850 – 1990 MHz spectrum range. The most common use of Broadband PCS spectrum is mobile voice and data services, including cell phone, text messaging, and Internet.</p>

RAN	Radio Access Network. A Radio Access Network is the layer of any mobile telecommunications network that connects user equipment (such as a mobile phone, a tablet computer, or any other consumer-level device) with the wireless carrier's core network.
RAN 1 through RAN 5	RAN 1 through RAN 5 refer to Working Groups that comprise the Radio Access Network (RAN) Technical Specification Group of 3GPP. The Technical Specification Group primarily responsible for development of the telecommunications standards central to this case is the RAN Technical Specification Group. The RAN Technical Specification Group has five Working Groups, RAN 1 through RAN 5. The Working Group responsible for establishing Band classes related to the 700 MHz spectrum was RAN 4.
Technical Specifications Group	Most of the standard-setting work conducted by 3GPP takes place in Technical Specification Groups and Working Groups. The Technical Specifications Group is the highest organizational level for 3GPP standard-setting. 3GPP's organizational structure includes four Technical Specification Groups tasked to create Specifications for accepted work items. Each Technical Specification Group consists of one or more Working Groups that perform the technical work of evaluating proposed work items and developing the draft Specification. The several Working Groups of a Technical Specification Group meet in plenary sessions to determine the content of each Specification. The Technical Specification Group most germane to this controversy was the Radio Access Network (RAN) Technical Specification Group.
Wireless Carrier Market	The wireless carrier market refers to the mobile communications service market in the United States, including individual and bundled offerings of devices and mobile voice, data, video and messaging services, provided by wireless communications operators (other than resellers, mobile satellite service operators, and narrowband service providers). This market includes 2G, 3G, and emerging 4G-LTE devices and services.
Wireless Device Purchase Market	The wireless device purchase market refers to the sale of devices by manufacturers, either directly to carriers or through various intermediaries, for ultimate use by customers of wireless carriers. The wireless device purchase market is in effect the wholesale device market, as opposed to the retail market through which individual users might acquire wireless devices.
Working Group	The Working Group is the basic organizational unit for 3GPP standard-setting. Working Groups may meet separately or in conjunction with the Technical Specification Groups to which they belong. Working Groups submit their work for approval at the plenary meetings of those Technical Specification Groups.
UMTS	The Universal Mobile Telecommunications System is a 3G mobile communications standard derived from GSM.